

Basavarajeswari Group of Institutions
BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT
 (Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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Fourth Semester B.E. Degree Examinations, September 2024

SOFTWARE ENGINEERING

(Common to CSE & AIML)

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. Missing data, if any, may be suitably assumed.

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO:PI)</u>
<u>MODULE – 1</u>			
1.	a. What is Software engineering? Identify and explain key challenges in Software Engineering?	06	(2 : 1 : 1.4.1)
	b. Identify and explain the contents of ACM / IEEE code of ethics.	06	(2 : 1 : 1.4.1)
	c. Demonstrate with a figure, the Incremental model of Software development and list the problems associated with it.	08	(2 : 1 : 1.4.1)
OR			
2.	a. Identify and explain the essential attributes of good software.	06	(2 : 1 : 1.4.1)
	b. Discuss the User and System requirements with example.	06	(2 : 1 : 1.4.1)
	c. Discuss the following with example in detail: (i) Interviewing (ii) Use-case	08	(2 : 1 : 1.4.1)
<u>MODULE – 2</u>			
3.	a. What is system modeling? Identify different advantages of system modelling.	08	(2 : 2 : 1.4.1)
	b. Demonstrate with a figure the context model for MHC-PMS system.	06	(2 : 2 : 1.4.1)
	c. Classify the three models of object oriented development and explain in detail.	06	(2 : 3 : 1.4.1)
OR			
4.	a. Apply Interaction modeling for transfer data in MHC-PMS. Draw use case and sequence diagram for the same.	08	(2 : 2 : 1.4.1)
	b. Discuss the following with respect to MHC-PMS (i) Classes and Associations (ii) Generalization	06	(2 : 2 : 1.4.1)
	c. Identify and explain the various Object Oriented themes supported for Object Oriented Technology.	06	(2 : 3 : 1.4.1)
<u>MODULE – 3</u>			
5.	a. Define Verification and Validation. Identify advantages of software inspection over testing?	06	(2 : 4 : 1.4.1)
	b. Identify and explain the general guidelines that can be used in test case design.	06	(2 : 4 : 1.4.1)
	c. Explain the Test-Driven Development process activities and Identify the benefits of TDD.	08	(2 : 4 : 1.4.1)

OR

6. a. Explain with a block diagram, the general model of Software Testing. Discuss different types of testing. **06** (2 : 4 : 1.4.1)
- b. Identify classes of Interface errors and guidelines for Interface testing. **06** (2 : 4 : 1.4.1)
- c. Define Acceptance testing. Identify different phases of Acceptance testing in detail with a diagram. **08** (2 : 4 : 1.4.1)

MODULE – 4

7. a. What is Software pricing? Explain different factors affecting Software pricing. **06** (2 : 5 : 1.4.1)
- b. Identify the process of reviewing the software and explain each activity. **06** (2 : 5 : 1.4.1)
- c. Illustrate with a figure, the Reengineering process. **08** (3 : 5 : 1.4.1)

OR

8. a. Identify three stages of project planning. Illustrate with a figure, the planning process and project plans. **06** (2 : 5 : 1.4.1)
- b. Identify the project scheduling process and explain each phase. **06** (2 : 5 : 1.4.1)
- c. Following table shows number of activities, durations and dependencies and milestones. Construct the Gantt chart and Staff allocation chart showing the critical path for the project schedule. **08** (3 : 5 : 1.4.1)

TASKS	DURATION [DAYS]	DEPENDENCIES
T1	10	-
T2	15	-
T3	15	T1 [M1]
T4	10	-
T5	10	T2, T4 [M2]
T6	5	T1, T2 [M3]
T7	20	T1 [M1]
T8	25	T4 [M4]

MODULE – 5

9. a. Identify and explain Extreme Programming practices in detail. **10** (2 : 5 : 1.7.1)
- b. Demonstrate Agile process development using SCRUM method with its characteristics and advantages. **10** (2 : 5 : 1.7.1)

OR

10. a. Identify and explain two ways of coping with change and changing requirements. **10** (2 : 5 : 1.7.1)
- b. What do you mean by pair programming? Identify advantages of Pair programming. **10** (2 : 5 : 1.7.1)

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